

# CDM8:4

## Professional DJ Mixer

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**CITRONIC**

Citronic Limited, innovative leaders in the manufacture of professional audio equipment, are proud to present the CDM8:4 Mixer.

Established in Melksham Wiltshire, in 1972, the company occupies prestigious purpose built factory headquarters and is one of the leading employers in the area.

The Company's award winning product range covers professional Audio Mixers, Amplifiers and Signal Processing. Each unit is manufactured to the highest possible standards, and all have an enviable reputation for reliability and value for money-the noted hallmark of Citronic products.

Substantial investment has been made in high technology CAD systems, manufacturing control and testing techniques. This sophisticated computerisation, coupled with an extensive research and development program, enables the company to offer an exceptional degree of manufacturing excellence and quality assurance.

Citronic has always listened carefully to the customer, and places tremendous emphasis on market research. This ensures that the exacting requirements of the installer and operator are complemented, without compromise, throughout the entire product range. This unique approach, coupled with a strong input from a highly qualified engineering team, ensures that Citronic maintains its position as a respected leader, in the industry's development.

Citronic has a distribution network throughout Europe, Asia and the Americas.

**WARNING**

In order to obtain the best service from the unit we STRONGLY recommend that you read this manual before you apply any power.

**Your Guarantee of Satisfaction**

This product is guaranteed to the original purchaser against defects in material and workmanship for one year from the date of initial purchase. Activate this guarantee at the time of purchase by returning the Guarantee Card to the address on the front page. Keep a copy of your sales receipt for proof of guarantee status, should it be necessary.

The crossfader itself is a replaceable part and is only guaranteed against defective workmanship. The slider selected for the crossfader function has been chosen for its excellent mechanical properties. In a discotheque application the extensive use of this facility means that the number of operations in a twelve month period can exceed the manufactures electrical specification.

If a malfunction occurs, the dealer who supplied the unit will be happy to handle the repair. When returning a unit, use the original factory carton - do not chance inadequate packing materials. Simply tape a note to the unit describing the malfunction.

If your unit is out of guarantee, we recommend that you return it to an authorised Citronic dealer for repair or service. Experienced personnel, supported by specialist testing equipment, will be able to find and correct the fault in the most efficient and cost effective way.

**10: CE Marking****EMC Conformity**

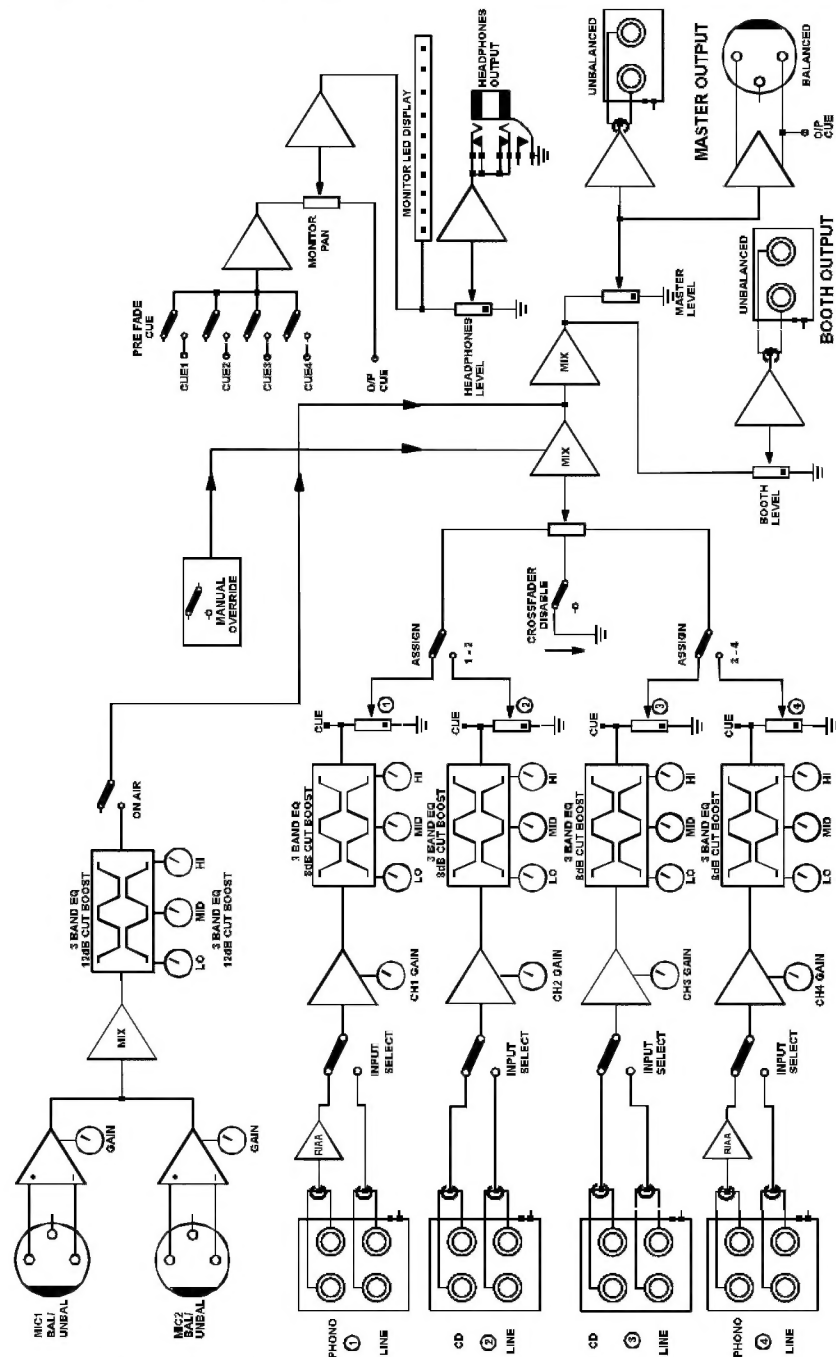
The CDM8:4 has been tested to demonstrate compliance with the EMC 89/336/EEC directive, under which the following harmonised standards apply:

- |      |             |                                   |
|------|-------------|-----------------------------------|
| i)   | EN52020     | Electromagnetic Immunity          |
| ii)  | EN61000-3-2 | Mains Harmonic Disturbance Limits |
| iii) | EN61000-3-3 | Voltage Fluctuations Limits       |
| iv)  | EN55013     | Electromagnetic Compatibility     |

**Electrical Equipment Safety Regulations (1994)**

The CDM8:4 has been designed and tested to demonstrate compliance to the LVD 73/23/EEC directive, using the following standard.

- |    |         |  |
|----|---------|--|
| i) | EN60065 | Safety Requirements for mains operated electronic equipment for household and similar general use. |
|----|---------|--|



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## 3: The CDM8:4 Professional DJ Mixer.

A fully featured professional quality DJ Mixer offering complete control over the audio path to allow truly creative mixing.

There are 10 Inputs comprising 2 Mics, 2 CD, 2 Phono and 4 Line all with complete control of gain and EQ..

The Mic inputs have gain control, 3 Band Eq, On-Air switch and a manual override system.

The music Inputs also have Gain and 3 Band Eq with overall level controlled by professional quality faders. All music channels have remote start facilities.

The CDM8:4 has a assignable dipless crossfader with the additional feature of being defeatable.

As well as a balanced main output this mixer also provide an additional booth output plus a BNC gooseneck lamp output..

## Connecting your mixer

The following pages give a full description of the connectors and their purpose. You should study this carefully before you power up the mixer to ensure you get the very best performance from your CDM8:4.

### Do's & Don'ts

There are a few general Do's and Don'ts thoughts that you should become familiar with if you have not had a great deal of experience with professional audio systems.

**Cables & Connectors** - Always use good quality cables and connectors. It might seem expensive when you first look at it, but the first time you have a problem in front of an audience you'll bless the day you made that small investment. 25 years in the business has taught us that over 75% of all problems with DJ systems are simple connector ones. Don't get caught out.

**Switching on your system** - Get into the habit of turning on the mixer and all the inputs to it before you turn on the amplifiers. The CDM8:4 has been designed not to harm your amplifiers or speakers if you turn the amplifiers on first, but this may not be true of the inputs plugged into the CDM8:4 Mixer. Play safe, always turn on your amplifiers last.

**Power Supply** - The power supply for your CDM8:4 is built into the mixer and will be fitted with a mains plug specifically for the mains supply in your country. If it does not match the power socket you wish to use check with your dealer before you plug it in. It is possible you could damage your mixer if it is not the correct version for your mains power supply. Worse still, it could be unsafe. Don't take chances with Mains Power - it can kill.

**Crossfader** - The crossfader is the most used feature on your mixer and great care has been taken in the choice of components for this function. Even so, it is the most likely thing to wear out first on your mixer, so we've made it quick and easy to replace. Don't get caught out, always carry a spare.

Parameter	Mic	Phono	Line/CD
Sensitivity	-53dBu (1.73mV)	46dBu (4mV)	0dBu (775mV)
Input Impedance	2K	47K	50K
Source Z Ohm	150 Ohm		2K Ohm
Max Gain	50dB		<-70 to +10dB
S/N Ratio*	68dB	73dB	> 87dB
Freq Response**	25Hz to 30KHz	RIAA	< 10Hz to 24 KHz
THD ***	0.042%		< 0.005%

### Microphone Equalisation

Lo	=	± 12dB @ 80Hz
Mid	=	± 12dB @ 600Hz
Hi	=	± 12dB @ 6KHz

### Music Channel Equalisation

Lo	=	± 12dB @ 100Hz
Mid	=	± 12dB @ 1KHz
Hi	=	± 12dB @ 10KHz

### Noise Floor

Main L,R Output:	< -100dBu
Mic Pre-Amp T.E.I.N.	- 118dBu

### Headphones

Load:	32 Ohms MIN
Power:	112mV @ 32 Ohms
Freq Response.**	11Hz to 25KHz
S/N	81dB

### Output

Master L, R Output:	Balanced XLR:	0 dBu (775mV rms)
	Unbalanced Phono:	0 dBu (775mV rms)
Booth, Aux Outputs:	Unbalanced Phono:	0 dBu (775mV rms)

Note:	*	: Measured at output 22Hz-22KHz Filtered
	**	: Measured at 1 dB w.r.t. a 0dB ref at Mixer Output
	***	: Measured at mixer output, 30KHz Filtered

### Dimensions:

Width:	483mm (19")
Height:	177mm (4U)

Depth: 95mm

Weight: 5kg

### Cut-out required:

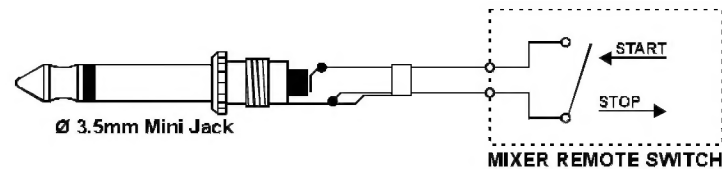
Width:	440mm
Height:	165mm



## 29) Remote Start Sockets

Music Channels 1-4 have a Remote Start facility provided via a standard 3.5mm jack socket. When a channel fader is increased from minimum the contacts of the jack socket short together. To re-open the contacts the channel fader needs to be returned to minimum. The remote start facility on the CDM8:4 is ideal for use with Citronic Turntables PD-1 and RT:1 as well as the Citronic CD-2 & CD-4 Dual CD players.

### Remote Start Jack Wiring



## Microphones

### 1) Microphone Input

Two combination XLR & 1/4" jack sockets are mounted on the front face of the mixer for connecting your microphones and offer both balanced or unbalanced connections:

Balanced Input Wiring:

Tip:	Pin2:	Positive	{HOT}
Ring:	Pin3:	Negative	{COLD}
Sleeve:	Pin1:	Ground	{SHIELD}

Unbalanced Input Wiring:

Tip:	Pin2:	Positive	{HOT}
Ring:	Pin3:	Ground	{SHIELD}
Sleeve:	Pin1:	Ground	{SHIELD}

Input Impedance 2K Ohm  
Input Sensitivity -53dBu (1.73mV)

### 2) Gain Controls

Each microphone has its own gain control allowing maximum microphone control and will accommodate most microphones, both low and high impedance's to 600 Ohms.

Range: <-70dB to 53dB

### 3) Microphone Equaliser

Both microphone inputs share a 3 Band Eq stage prior to the ON AIR switch.

#### EQ Control 'Lo'

This control allows 12dB of cut or boost to the low frequencies. (See page 13)

#### EQ Control 'Mid'

This control allows 12dB of cut or boost to the mid frequencies. (See page 13)

#### EQ Control 'Hi'

This control allows 12 dB of cut or boost to the high frequencies. (See page 13)

### 4) On Air Switch

Activates or de-activates both microphone inputs without the need to adjust the Gain controls.

### 5) Manual Override

When this switch is held down the music channels will be attenuated by 15dB.

**Music Channels 1-4**

Four stereo Line, 2 stereo CD and 2 RIAA Phono inputs are arranged into 4 main music channels.

**6) Input Sockets**

Phono Input: (Ch1, 4)	RIAA Equalised Stereo Phono Sockets. Input Impedance: 47K Ohm Source Impedance: Typical Magnetic Cartridge Sensitivity: 3.8mV (-46dBu)
CD/Line Input: (CH1,2,3 & 4)	Standard Stereo Phono Sockets. Input Impedance: Typically 10K Ohm Source Impedance: 2K Ohm (MAX) Sensitivity: 775mV RMS (0dBu)

**7) Input Gain Controls**

Each main input channel has a gain control offering <-70 to +10dB gain range allowing compensation for differing input levels.

**8) Input Selection Buttons**

Selects either CD or Line on channels 2 and 3 or Phono or Line on channels 1 and 4.

**9) Music Channel Equaliser**

Each music channel has a 3 band Eq stage providing comprehensive control over individual input Eq content.

EQ Control 'Lo'

This control allows 12dB of cut or boost to the low frequencies. (see page 13)

EQ Control 'Mid'

This control allows 12dB of cut or boost to the mid frequencies. (see page 13)

EQ Control 'Hi'

This control allows 12dB of cut or boost to the high frequencies. (see page 13)

**10) 45mm Fader**

The slider sets the signal level of the channel being mixed onto the main Left, Right Output channels or sent to the assignable Crossfader.

**11) Removable Crossfader**

This dipless 45mm crossfader is dedicated between either CH.1 or 2 and CH.3 or 4 dependent on the setting of the assign switches. (12)

The crossfader is easily and quickly replaced by removing the 2 outer pozi countersunk screws on the crossfader panel and unplugging attached ribbon connector.

**12) Assign Switches**

The 4 music channels are assigned 2 each side of the crossfader: channels 1 & 2 to the left and channels 3-4 to the right. Each ASSIGN switch routes the appropriate

**27) IEC Socket/Fuse Holder**

The AC power to the mixer is via a standard IEC/Fuse Holder connector. The mixer is supplied with an AC cord set.

Cable colour code:

	UK/Euro	U.S.A
Live:	Brown	Black
Neutral:	Blue	White
Earth:	Yellow/Green	Green

**WARNING: THIS MIXER MUST BE EARTHED FOR SAFETY AND GOOD GROUNDING PRACTICES IN MIXING**

In the event of ground-loop problems in the audio system, DO NOT disconnect the AC supply Earth to any equipment before consulting equipment instruction manuals.

For example most amplifiers have audio ground lift switches or are designed specifically to avoid ground-loop problems connected to "earthed" mixers.

Ensure the mixer has a "clean" AC supply from a wall socket that is not used for other equipment that would lead to interference - such as lights, refrigerators etc.

**Fuse Holder**

The AC supply to the mixer is protected by a fuse housed in the IEC socket/fuseholder.

**AC Supply Fuse Rating**

220-230V: T250mA

115V: T500mA

To change the fuse:

1) Disconnect the AC supply lead.

2) Simply remove the fuse using a flat blade screwdriver and replace with the appropriate fuse.

**28) Earth Stud**

Star point earth for auxiliary equipment e.g. Turntables

**Cue/Monitor Section****19) CUE Switch**

This switch and indicator allows pre-fade listen on input signals of any of the 4 music inputs through the headphone and LED meters, (useful while setting gains or trouble-shooting).

**20) Monitor Pan Control**

Varies the mix between the cued input and main L,R output, ideal for accurate beat mixing. Full left will give cued input, full right will give main output program.

**21) LED Monitor Display**

Twin 10 segment LED ladders, with peak hold, show the signal level of whatever is present on CUE/MONITOR bus, either PFL or output signals dependent on setting of monitor PAN control (20).

The LED ladder has a range of -22 to +8dB. The optimum running level of 0dB is reflected by the yellow LED in each display.

**22) Headphone Level Control**

Sets desired level to headphones. Headphone program depends on the position of the monitor pan control and cue switches.

**23) Headphone Socket (Standard Stereo 1/4" Jack)**

L/H Channel:	Tip
R/H Channel:	Ring
Ground:	Sleeve
Minimum Load Impedance:	32 Ohms

**24) Power Switch**

Controls the AC power to the mixer.

*Note: Be sure to switch on the power to you mixer before switching on the amplification system.*

**25) Power Indicator**

This green LED is lit when power is applied to the mixer and AC Power Switch (24) is ON.

**26) 12 Volt Light BNC Connector**

A 12VDC, 5 Watt output is supplied for connection of a goose neck lamp.

channel to that side of the crossfader.

**13) Crossfader Defeat Switch**

When depressed the crossfader is disabled and all 4 music channels act independently.

*Note: When the crossfader is disabled the overall output level will be slightly higher so level controls such as gains and channel faders may need to be adjusted to maintain the optimum running level.*

**14) Master Output Level Control**

This rotary pot controls the overall output level leaving the mixer at its Master Balanced XLR and unbalanced Phono Socket outputs.

**15) Balanced Outputs**

Master stereo program output provided by 3 pin Male XLR sockets:

Output wiring (Balanced)	Pin 1 - Ground
	Pin 2 - Positive
	Pin 3 - Negative

Nominal Output Level: Balanced: 0dBu (775mV rms)

Impedance: Output < 50 Ohm Minimum Load 600 Ohm

**16) Unbalanced Output**

Master stereo program output provided by a standard unbalanced phono sockets.

Level = 0dBu (775mV rms)

Output Impedance = < 50 Ohm

Load Impedance (MIN) = 5K Ohm

**17) Booth Output Control**

This pot controls the overall output level of the unbalanced Booth Output. The program content of the Booth Output is the same as the MASTER OUTPUT.

**18) Booth Unbalanced Output**

Level = 0dBu (775mV rms)

Output Impedance = < 50 Ohm

Load Impedance (MIN) = 5K Ohm



